

Appl. No. 10/044,747
Filed: January 10, 2002
Page 7

REMARKS/ARGUMENTS

Claims 1 to 4 and 7 to 35 are still before the Examiner. The indication of allowable subject matter in claims 33-35 is acknowledged. Claim 33 has been rewritten into independent form and should now be in condition for allowance along with dependent claims 34-35.

It is noted that in the previous Office Action, the Examiner had indicated that claims 32 to 35 contained allowable subject matter, if rewritten in independent form. Therefore, there appears to be a discrepancy since Claim 32 was not rejected in the detailed portion of the present Office Action, but is shown on the summary sheet as being rejected. Unless otherwise indicated by the Examiner, the Applicant will conclude that, in the present Office Action, the Examiner meant to state that claim 32 also contains allowable subject matter, and would be allowable if rewritten in independent form.

Rejection Under 35 U.S.C. 103

The Examiner has rejected claims 1 to 4, 7 to 20 and 22 to 31 under 35 U.S.C. 103(a) as being unpatentable over Webb (U.S. Patent No. 3,183,665) in view of Schöyer *et al.* (U.S. Patent No. 4,950,341).

The Examiner asserts that Webb discloses formed shapes of oxidizer and fuel. The Examiner further asserts that Webb discloses that the formed shapes are placed in a cellular structure and filled in with a binder that fills all the voids and gives structure to the formed shapes of oxidizer and fuel (see Col. 7). The Examiner acknowledges that Webb does not disclose the particular fuel, oxidizer, and binder. The Examiner also asserts that Schöyer *et al.* discloses a composition for use in a rocket that comprises hydrazinium nitroformate, aluminum, and an energetic binder such as GAP or BAMMO.

The Examiner concludes that one having ordinary skill in the art would use the fuel, oxidizer and binders disclosed by Schöyer *et al.* with the structure as taught by Webb since Webb suggests that any fuels, oxidizers and binders can be used.

Appl. No. 10/044,747
Filed: January 10, 2002
Page 8

The invention as defined in independent claim 1 is directed to an oxidizer package for use in solid fuel propellant system, the oxidizer package comprising a solid oxidizer in the form of discrete pellets of a pre-determined geometric shape, wherein the pellets are arranged in an array with spaces amongst the pellets and the spaces are filled with a binder.

Webb teaches that the principal object of his invention is "to provide an improvement of the cellular grain by a novel arrangement of separated fuel and oxidant carrying cellular or honeycomb sandwiches to provide a mechanical separation between the oxidant and the fuel" (see Col. 1, lines 33-36). In one embodiment, the sandwich comprises a cellular structure, wherein each cell of the cell structure is filled with solid oxidant. The cellular structure is then covered with skins 40 and 41 (see Figure 5) to maintain the solid oxidant within the sandwich. The cellular structure itself, as noted by Webb at Col. 3, lines 73 to Col. 4, line 3, is made of a material that disintegrates or burns and can be metal. Webb does not teach or suggest a solid oxidizer in the form of *discrete pellets of a pre-determined geometric shape*. The cellular structures that are filled with solid oxidizer do not constitute a *solid* oxidizer in the form of discrete pellets.

Furthermore, Webb teaches at Col. 6, line 63 to Col. 7, line 12, that the sandwiches containing the fuel and oxidant are alternately placed in a casing and all the spaces between the sandwiches are filled with a solid non-compressible material. This configuration does not constitute the oxidizer package of the claimed invention. The casing of alternately placed sandwiches, including a solid non-compressible material, as taught by Webb does not motivate or suggest to one skilled in the art to make a *solid* oxidizer in the form of discrete pellets wherein the pellets are arranged in an array with spaces amongst the pellets and the spaces being filled with a binder.

Moreover, as noted at page 4, lines 24 to 27 of the above-identified application, the oxidizer package of the claimed invention is suited for the use of high performance oxidizers where such oxidizers frequently exhibit incompatibilities and/or processing difficulties in conventional compositions. In addition, the specific configuration of the present invention optionally permits the use of a pellet that comprises both an oxidizer and a fuel, or pellets

Appl. No. 10/044,747
Filed: January 10, 2002
Page 9

comprising an oxidizer and the binder comprising the fuel. Therefore, the oxidizer and the fuel may be in contact with one another, which is clearly not permissible in Webb. As discussed above, the principal object of his invention is "to provide an improvement of the cellular grain by a novel arrangement of separated fuel and oxidant carrying cellular or honeycomb sandwiches to provide a *mechanical separation* between the oxidant and the fuel" (see Col. 1, lines 33-36). This is not, however, a restriction of the oxidizer package of the claimed invention.

Neither Webb nor Schöyer, either alone or in combination, teach or suggest a solid oxidizer in the form of discrete pellets of a pre-determined geometric shape. Furthermore, these references do not teach or suggest the pellets arranged in an array with spaces amongst the pellets and the spaces filled with a binder.

For the reasons noted, the invention as defined in claim 1 and the claims dependent from claim 1 patentably distinguishes over the prior art. Applicants respectfully request withdrawal of the rejection of the present claims.

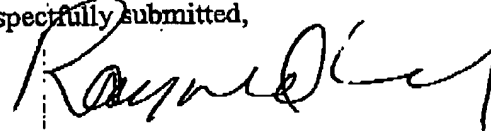
Conclusions

Applicants respectfully request reconsideration of this application and timely allowance of all of the pending claims.

Appl. No. 10/044,747
Filed: January 10, 2002
Page 10

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,

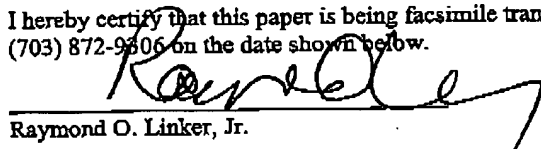


Raymond O. Linker, Jr.
Registration No. 26,419

Customer No. 00826
ALSTON & BIRD LLP
Bank of America Plaza
101 South Tryon Street, Suite 4000
Charlotte, NC 28280-4000
Tel Charlotte Office (704) 444-1000
Fax Charlotte Office (704) 444-1111
CLT01/4648321v1

CERTIFICATION OF FACSIMILE TRANSMISSION

I hereby certify that this paper is being facsimile transmitted to the U. S. Patent and Trademark Office at Fax No. (703) 872-9806 on the date shown below.



Raymond O. Linker, Jr.

May 20, 2004
Date